

ATMOSPHERIC EQUIVALENT TEMPERATURE ANALYSIS

Applicants: Stilianos G. Roussis and Barbara J. Shannon

Attorney Docket No. CJB-0109

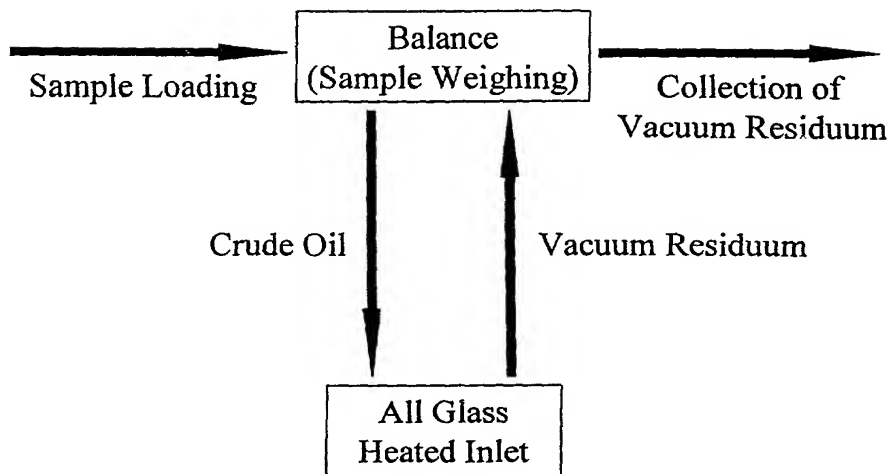


FIG. 1

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CALIBRATION

Select set of crudes with known distillation curves

Establish constant subambient pressure for apparatus

Determine weight percent yields at different process temperatures for set of crudes

Construct weight percent yield plot versus process temperature for set of crudes

Determine the AET which corresponds to the process temperature under process pressure conditions for set of crudes

VACUUM RESIDUUM COLLECTION

Set process temperature and pressure as determined in CALIBRATION procedure

Validate the stability of the apparatus with Quality Control (QC) samples

Repeat CALIBRATION procedure if required, based on QC data

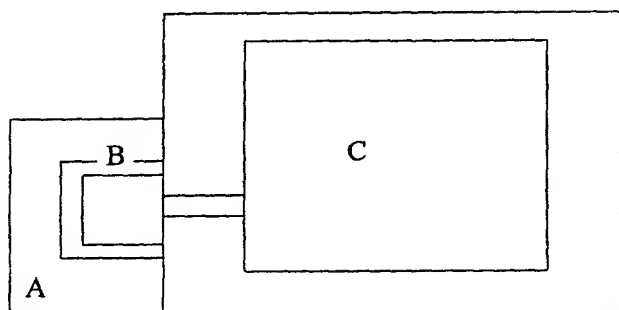
Collect crude oil residuum

FIG. 2

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LEGEND

- | | |
|---|---------------------------|
| A | Sample Oven |
| B | Sample holder (ampoule) |
| C | All-glass heated manifold |

FIG. 3

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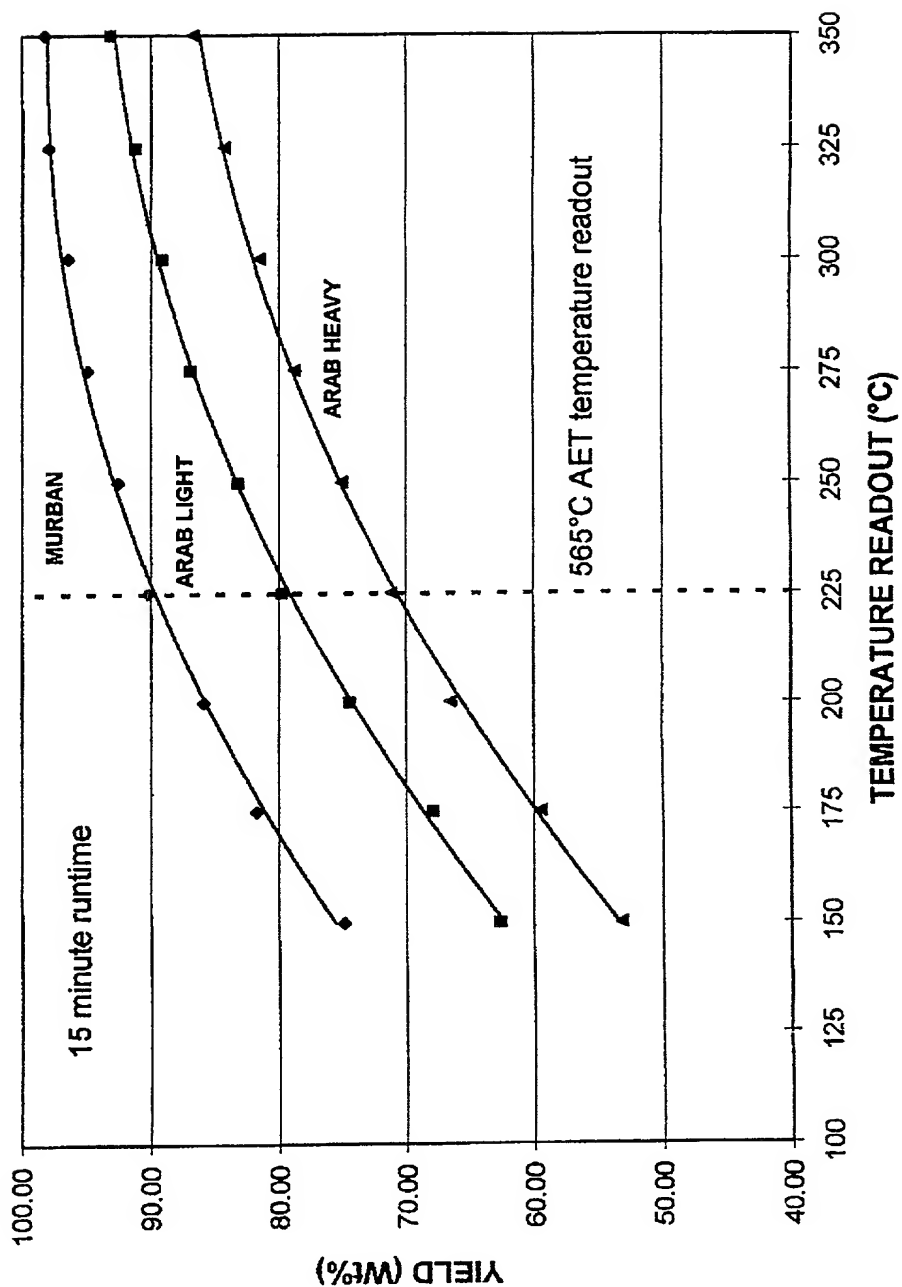


FIG. 4

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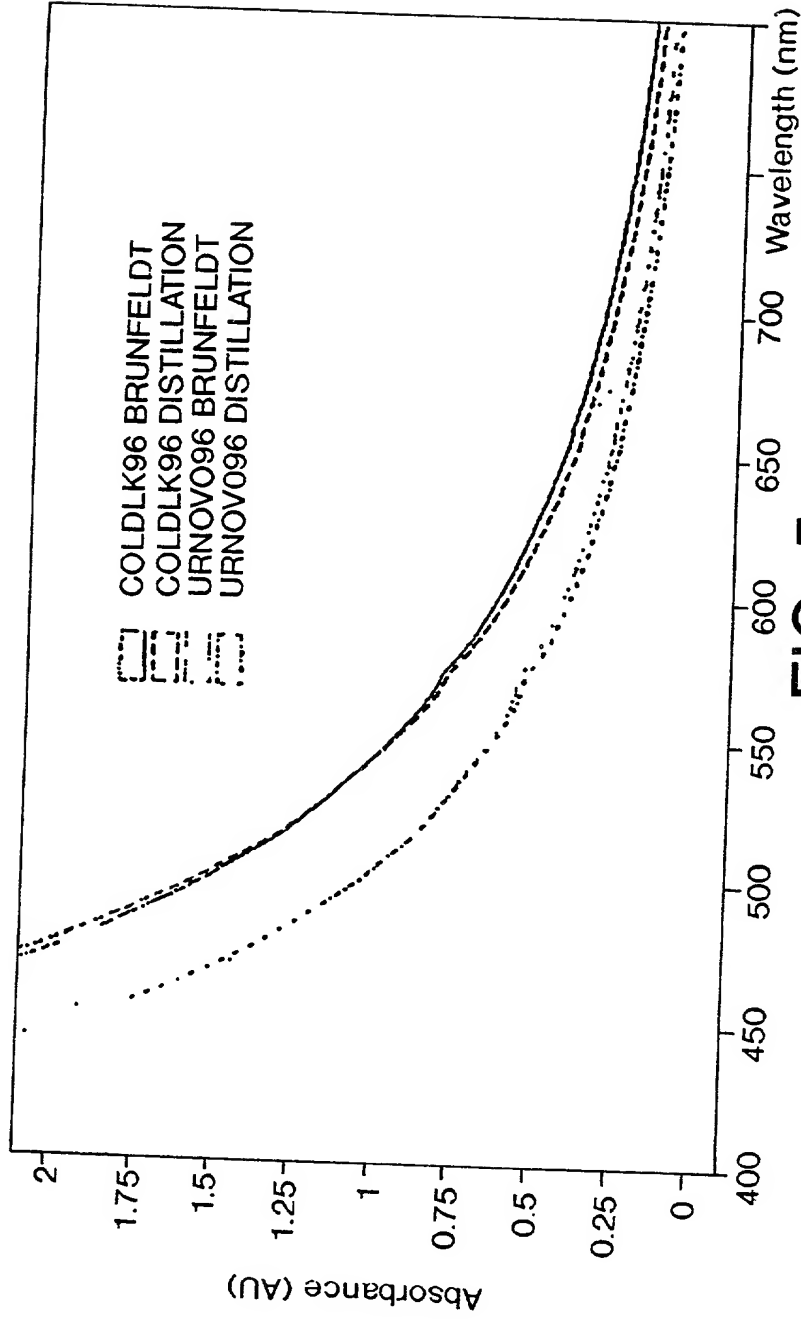


FIG. 5

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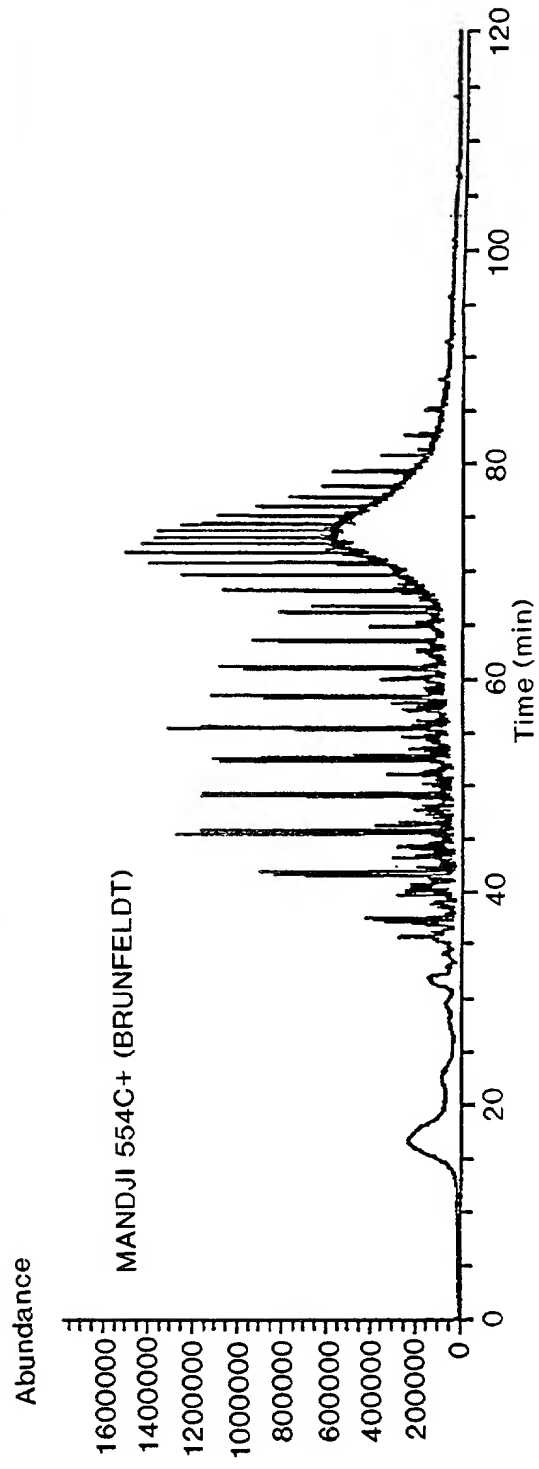
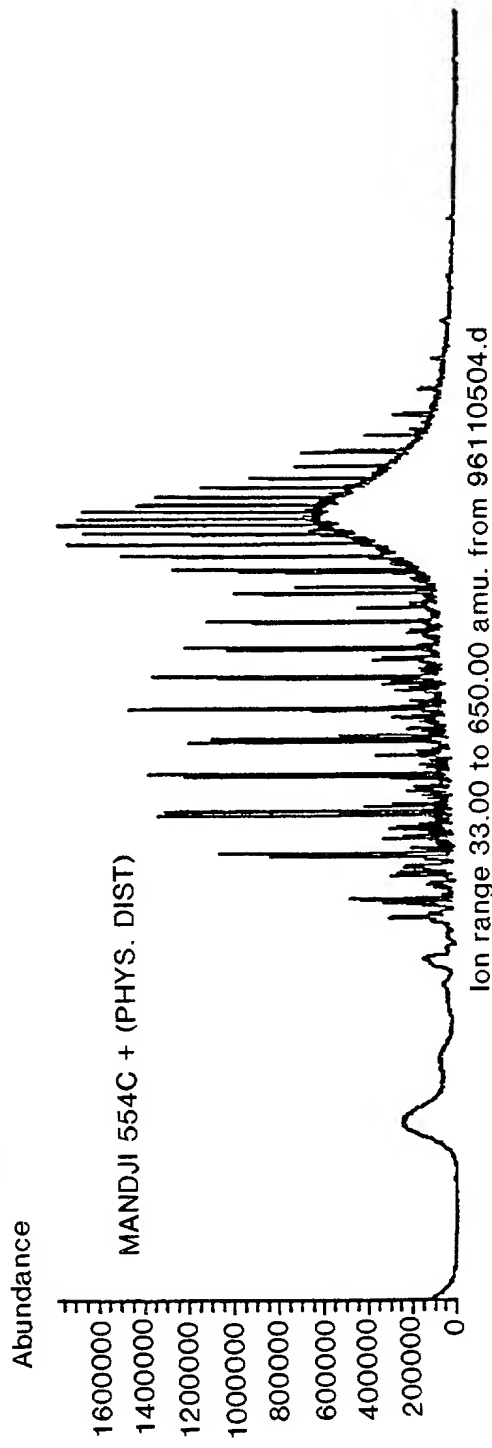


FIG. 6